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# When the Books Hit Back: Perceived Stress in University Students

Henry Stoddard  
*SIT Study Abroad*

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# **When the Books Hit Back: Perceived Stress in University Students Durban, South Africa**

**Henry Stoddard**

**Advisor: Dr. Carol Mitchell, UKZN Pietermaritzburg**

## Acknowledgements:

I would like to firstly thank everyone at SIT who made this project possible. To Zed, Clive, Chris, Thula, Hlobi, and all of my fellow students from the Fall 2017 Community Health and Social Policy program, thank you for being a part of this experience with me and shaping my journey. I would also like to thank my ISP advisor, Dr. Carol Mitchell, without whom I would have been quite lost. I must also thank all of the participants of my survey, focus groups, and interviews, who generously took the time to tell me about their experiences and opinions. To my homestay family in Cato Manor: thank you for welcoming me into your home and giving me a view into your lives. Finally, I would like to thank my family and friends back in the U.S. for supporting me during my time abroad.

**Abstract:**

University students are a particularly high-risk population for mental illness due to high-stress levels. The university students of KwaZulu Natal, South Africa are no exception to that trend. This study surveyed and interviewed university students, and interviewed various mental health professionals from the Durban region of South Africa. The data was analyzed and used to better understand the current status of South African university students' perceived stress, as well as the causes of their stress levels. Results showed no significant differences among demographic groups and perceived stress levels, but further research is needed to draw more reliable conclusions. In the future, such information can be used to create better stress prevention strategies and to reallocate resources where they are needed most.

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### Explanation of frequently used acronyms:

- HIV: Human Immunodeficiency Virus
- AIDS: Acquired Immunodeficiency Syndrome
- PSS: Perceived Stress Scale
- UKZN: University of KwaZulu-Natal
- SD: Standard Deviation

## Introduction:

### *Motivation*

University students are a particularly stressed demographic within the greater population. South African university students are particularly vulnerable to stress due to historical disadvantages and unique higher education situations. This vulnerability has produced especially visible impacts in the recent past, with several suicides just this year and a continuation of high dropout rates. This study aims to further research the stress levels of South African university students, as well as the causes of stress and stress coping methods.

This project aimed to:

- Observe stress levels of South African university students
- Understand causes of stress and coping methods in South African university students
- Provide recommendations for improved mental health resources and further research

Main Project Questions:

- What are the perceived stress levels of KwaZulu-Natal university students?
- What causes stress in KwaZulu-Natal university students?
- How do KwaZulu-Natal university students cope with stress?

Further Project Questions:

- What is the relationship between demographic variables and student stress levels?
- When do students feel most stressed?



## Literature Review:

### *Introduction*

The literature review aims to cover pertinent information to the overall study. It begins with an explanation of the human stress response and explains how the stress response can be maladaptive. Then, the negative impact of stress on one's health is addressed, followed by stress specifically in university students. Finally, the literature review provides context around mental health policy, stress, and university students specifically in South Africa.

### *Stress in the General Population*

Stress is a frequently researched topic in the recent past, but it was more than 70 years ago that a Dr. Hans Selye developed one of the most well-known scientific explanations of biological stress: General Adaptation Syndrome (GAS). To understand how stress can negatively affect the body, one must first understand how the human body processes stress. Dr. Selye was a Hungarian endocrinologist who theorized that there were three distinct phases that the human body went through when experiencing a stressful situation (Selye, 1946). The first is the alarm stage, where the body initially encounters the thing that is stressful (known as a “stressor”). During the alarm stage, the human body activates the sympathetic nervous system (SNS), better known as the “fight-or-flight” response. The SNS essentially causes the entire body to reallocate resources to increase chances of short-term survival. The first, most immediate response is the brain activating the adrenal glands to release epinephrine and norepinephrine (Torpy & Chrousos, 1997). Later, the hypothalamus and pituitary gland activate a separate part of the adrenal glands to release cortisol into the bloodstream. Following these chemical changes are behavioral changes, like increased alertness and focus. The body also reduces function of pain receptors and inhibits reproductive behaviors. These changes can be seen in physiological measures as well: heart rate and blood pressure increase and blood flow is directed to the heart, muscles, and brain. These reactions require a large increase in energy production and thus must eventually be “turned off” so the body can recover. This happens during the second stage of the GAS, known as the resistance stage. At this point, the body activates the parasympathetic nervous system (PNS) which attempts to return some of the physiological functions to normal levels. However, the body will remain on alert and be ready to return to the alarm stage if necessary. This stage is beneficial to the body to help it calm down and not overexert itself.

However, the third stage is when the body overexerts itself. It is known as the exhaustion phase, and it is only meant to occur in rare cases where a human experiences high levels of stress for an extended period of time. The body is pushed beyond its capacities and resources are depleted, leaving the human more susceptible to disease and death.

The stress response theory outlines an adaptation that would have kept humans alive during a time when they may have been prey for large predators. As the predator attacked, the caveman would have entered the alarm stage, allowing him to run faster, jump higher, and think more quickly, thus increasing his chances of survival. Assuming he is not caught and eaten by the predator, the caveman would escape and calm down, eventually returning to a normal resting status. The human stress response evolved to help human beings survive in a different era. In today's world, it can be maladaptive. A retrenched businessman, a person driving in rush hour traffic, and a student taking a test would all experience varying types of stress. In response to this stress, they would enter the alarm stage. However, since these situations involve stressors that will likely take longer to resolve than being chased by a predator, their bodies may be forced to remain in the alarm stage for longer than normal, and they could eventually end up in the exhaustion stage. The businessman could find himself feeling depressed and have difficulty finding a new job; the driver could become so aggravated that she has a heart attack; the student could become so stressed about whether or not they receive high marks on the test that they could use drugs and/or alcohol to cope, could drop out of university, or could even consider committing suicide.

### *Negative Effects of Stress*

Periodic, moderate stress is a part of everyone's lives across the globe. Most people cope with daily stress, but severe, chronic stress can have serious physical and mental health consequences. Chronic over-activation of the body's stress response system can lead to increased vulnerability to autoimmune diseases, atypical depression, chronic fatigue, and infections (Korte, Koolhaas, Wingfield, & McEwen, 2005). Furthermore, brain changes related to chronic stress (like suppressed neurogenesis and structural atrophy) make it even more difficult for the body to process and respond to stressors (McEwen, 2000). A study of nursing students in Brazil found high levels of correlation between stress levels and anxiety symptoms (Kurebayashi, Prado, & da Silva, 2012). Stress can even have significant effects on overactive bladder symptoms,

correlating with interstitial cystitis/bladder pain syndrome and overactive bladder syndrome (Lai, Gardner, Vetter, & Andriole, 2015). Some studies have found higher levels of stress by tracking the activity of the hypothalamus-pituitary-adrenal (HPA) axis. These studies found hyperactivity of the HPA axis to be associated with clinical depression (Pruessner, Hellhammer, Pruessner, & Lupien, 2003). Stress can even have effects on the shortening of telomeres: women with high levels of perceived stress had telomeres shorter by the equivalent of 10 years of additional aging compared to women with low stress (Epel, Blackburn, Lin, Dhabhar, Adler, Morrow, & Cawthon, 2004). More and more studies are showing that, in the modern world, human beings are highly stressed and experience negative health outcomes from that sustained stress (Juster, McEwen, & Lupien, 2010). Chronic stress is a risk factor that significantly affects morbidity and premature mortality on both individual and societal levels (Stauder, et al., 2009). Furthermore, university is a time at which students undergo a difficult developmental transition from childhood to adulthood. This transition can be highly stressful and can increase the risk of mental illness. Most lifetime mental disorders have their first onset by age 24 and, if left untreated, these disorders can have negative consequences related to academic success, productivity, substance use, and social relationships (Hunt & Eisenberg, 2010). Students reporting greater stress are less likely to practice healthy behaviors, are more likely to practice bad habits, and exhibit lower self-esteem (Hudd, et al., 2000).

Unfortunately, these situations happen every day, all over the world. Developments in psychology and neuroscience have allowed more accurate diagnosis, and many people have begun to fight the stigma associated with receiving mental health support. However, as Kurt Vonnegut said in his 1997 book, *Timequake*: “Wake up! You were sick, but now you’re well again and there’s work to do” (Vonnegut, 1997, p. 241).

### *Stress in University Students*

University students are a particularly stressed demographic within the general population. In the United States, a study showed more than one in three undergraduate students reported depression so severe that it was difficult to function, and almost one in ten had seriously considered committing suicide in the past year (Hunt & Eisenberg, 2010). One study on Greek university students indicated high depression rates and poor mental health (Kounenou, 2011).

The Youth Sight study published in 2017 found that 87% of first-year students in the United Kingdom have difficulty coping with the social or academic elements of university life. Another study found that 77.6% of students experienced moderate stress and 10.4% experienced severe stress (Abouserie, 1994). Similar results have been found in many places across the globe, including Turkey, Canada, and the United Kingdom (Bayram & Bilgel, 2008; Campbell, Svenson, & Jarvis, 1992; Bewick, Koutsopoulou, Miles, Slaa, & Barkham, 2010). These studies support the conclusion that stress is prevalent in university students, but effective solutions require an understanding of why such stress occurs.

### *Causes*

While it is well established that university students have high stress levels, it can be difficult to pinpoint the cause(s). Universities can have diverse populations who range in financial situations, birthplace, and academic preparation, among other factors. This variation in demographics leads to varied causes of stress among university students. For example, a student of low SES status is likely to be more stressed about their financial situation than a student of higher SES status. This differentiation of causes of stress is important because it defines what solutions should be implemented. Even though both students may be highly stressed, the most effective solution for the low SES student may not be the most effective solution for the student of higher SES.

Dissecting which aspects in particular cause of stress in university students provides a telling story. The transition to university life can be difficult and a large proportion of students cited this transition as a source of stress, as well as studying (59%), isolation (44%), balancing work and studying (37%), financial difficulties (36%), and independent living (22%) (Youth Sight, 2017). Abouserie (1994) found that examination and exam scores were the highest causes of stress in students. One study found unsuitable teaching methods, unsatisfactory study environment, fear of failure in examinations, underlying social problems, and economic problems to be common sources of stress among of Saudi Arabian students (Al-Dabal, Koura, Rasheed, Al-Sowielem, & Makki, 2010). Malaysian students also found finances, lack of sleep, and family issues to be their most prominent difficulties (Redhwan, Sami, Karim, Chan, & Zaleha, 2009). It is also important to note reasons for not reducing stress: one study of Canadian

undergraduate students reported common reasons for not destressing were lack of time and lack of self-discipline (Campbell, Svenson, & Jarvis, 1992).

As is true with the general population, some subgroups are more at risk for and have a higher prevalence of stress. Other subgroups that are more at risk for mental health problems include students from lower SES, students with relationship stressors, low social support, and/or students who are victims of sexual violence (Eisenberg, Gollust, Golberstein, & Hefner, 2007). In addition, results of a Pakistani study suggested correlations between students' depression, anxiety, hostility, and familial support (Jibeen, 2016). Negative health outcomes were significantly more common in students with lower parental education level, and lack of permanent residence (Kounenou, 2011). Substances misuse can lead to higher stress levels, and Hunt et al. (2010) found that alcohol and drug misuse was widespread across campuses. There are often differences found between genders and perceived stress. For the general student population, females tend to be more stressed (Abouserie, 1994), but for student-athletes, males tend to be more stressed (Dhurup & Dubihlela, 2014). To create effective solutions for students' stress and mental health issues, universities must pay special attention to the variation within university populations.

### *Resources and Stigma*

Many universities already have resources in place for stressed students. Some colleges have social workers, student-led mental health groups, and even clinical psychologists all on campus. However, some universities provide resources that are not adequate for their students. Additionally, some students are unaware or unwilling to use the mental health resources available to them (Hunt & Eisenberg, 2010). One American study revealed that some students with mental distress were not aware of mental health services, or were aware but did not use them (Yorgason, Linville, & Zitzman, 2008). Malaysian students reported using counseling services, doing meditation, sharing their problems with others, getting more sleep, and spending time with friends as frequent stress coping methods (Redhwan, Sami, Karim, Chan, & Zaleha, 2009). Canadian undergraduate students reported limiting commitments, exercise, and worrying less as their primary methods of destressing (Campbell, Svenson, & Jarvis, 1992). There is a need for further research into the stress levels of South African university students. Furthermore,

there should be more research into mental health resources for university students, and the perceptions surrounding the use of those resources.

## Context

### *Stress and Mental Health in Africa and South Africa*

While stress and university students have both been researched separately in South Africa, less research exists on the mental health of South African university students. However, one can use the mental health of university students in other nations as a baseline estimate. Furthermore, the mental health resources in South Africa are notably worse in comparison with many other nations (World Health Organization, 2005). It is worth noting that this comparison could be misleading due to the underlying systems at work and the vast differences between nations across the globe, making comparison difficult. Nonetheless, it is likely that the mental health of South African university students is as bad, if not worse, than that of university students from other nations.

Ghana is another African nation experiencing increased numbers of students participating in higher education. In a study using the Perceived Stress Scale (PSS) at the University of Cape Coast, 70% of first-year students reported moderate levels of stress and 3.5% reported high levels of stress, while only 25% reported low stress (Amponsah & Owolabi, 2011). Another study at the same university found 39% overall depression prevalence and up to 8% severe depressive symptoms. Significant predictors were lack of social support, heavy alcohol consumption, and previous trauma (Asante & Andoh-Arthur, 2015). In a study conducted at the University of Botswana, results showed that an overwhelming majority of students (88%) reported having trouble concentrating on present events due to stress at some point or often (Agolla & Ongori, 2009). The same study also surveyed students on the causes of their stress. The most common responses were continuous poor performance, workload, inadequate resources, and low motivation. Stress and mental illness are prevalent and severe in university students of African nations other than South Africa.

Other studies have focused on stress related to acculturation (the process of social, psychological, and cultural change caused by the blending of multiple cultures). Acculturative stress is certainly present in South Africa due to the presence of a wide variety of cultures (including Dutch, British, Khoi/San, Zulu, Xhosa, Indian, and others). One study of native peoples,

refugees, and various ethnic groups acculturative stress in Canada found that their stress was most related to how similar their original culture was to Canadian culture (Berry, Kim, Minde, & Mok, 1987). It is likely that South African university students feel varying levels of acculturative stress depending on how different their home cultures are in comparison with the cultures they experience on their university campus. Students experiencing higher differences between their home to university culture may experience higher stress levels.

### *South African Stress and Mental Health Policy*

As many studies have already shown, university students are particularly stressed (Youth Sight, 2017; Eisenberg, Gollust, Golberstein, & Hefner, 2007). Furthermore, the university environment can be even more difficult for students who are from certain demographics, like lower socioeconomic status for example (Williams & Yu, 1997). However, South Africa has a unique situation in its higher education world. Due to the relatively recent fall of the apartheid government, more and more students are attending university. However, while enrollment has increased, retention and graduation rates remain low and dropout rates are high, particularly among historically disadvantaged students (Sommer, 2013). Some of these students come from poor and/or rural families. Furthermore, many of these students are the first in their family's history to ever participate in higher education. This puts an additional layer of pressure on the students to succeed since their families are paying large fees for them to attend university. South Africa has also gone through significant surges in student action surrounding colonization and student fees during the #FeesMustFall protests, demonstrating a high level of student dissatisfaction. College campuses create a toxic environment due to heavy workloads, the pressure to succeed, and stressful examinations. This environment can lead to depression, anxiety, and even suicide (Hunt & Eisenberg, 2010). Sustained, high levels of stress also raise one's risk of negative psychological and biological health outcomes (DeLongis, Folkman, & Lazarus, 1988).

In a lecture given to SIT: Community Health and Social Policy students concerning the education system in South Africa, PowerPoint slides showed several disturbing headlines related to violence and injury (McGladdery, 2017). These headlines were solely from the previous month and a half prior to the lecture, yet they were many in number and involved many injuries to students. It is quite apparent from these headlines that the South African education system is

far from perfect. The life orientation portion of the South African curriculum relates to mental health, among other types of health, and promotes personal and social well-being as early as Grade R (McGladdery, 2017). Later on, this subject name changes to “life orientation”, but the subject material remains similar. Students learn about various life skills like social, personal, intellectual, emotional, and physical growth, knowledge of personal health and safety, interpersonal relationships, and respect and tolerance for diversity. However, students may not be receiving adequate teaching on these topics. For example, the development of self in society is taught for five hours over the course of five weeks. Students are expected to learn about life roles, developmental changes, coping, and values and strategies for making responsible decisions all within those five hours (McGladdery, 2017).

Of the literature that exists, it appears that South African university students are no exception to the trend of high stress levels. A study conducted in Southern Gauteng found a high prevalence of stress among student-athletes (Dhurup & Dubihlela, 2014). Multiple recent studies found pervasive stress among university students, mainly caused by personal, academic, relationship, and environmental problems (Mudhovozi, 2011; Bhayat & Madiba, 2017). A study from the University of Johannesburg found that stress from the death of loved ones and from poverty during students’ first year had a sustained negative impact on academic progress and students’ well-being over the next two years (van Breda, 2017). South African students appear to have similar causes of stress as students elsewhere in the world, frequently citing academic overload, perceived stress, test anxiety, and lack of social support (Sommer, 2013). In addition, the most common factors that South African students perceived as problematic were lack of preparation and insufficient academic competencies (Exner, 2003). University students in some areas of South Africa have no counseling services, even though students report a need for such services (Blom, 1989). South African students also report stigma related to seeking psychological counseling: “Students feel shame and guilt when they are struggling psychologically and as a result avoid seeking psychological intervention for fear of being negatively stigmatized” (Lawrence, 2009, p. 2).

In South Africa, mental health service delivery has improved in some ways but stagnated in most. Between 2000 and 2010, epidemiological studies have progressed, but intervention studies and economic studies have been lacking. A majority of studies inquired about mental health care services (Petersen & Lund, 2011). Results showed progress in decentralized care but



a lack of resources, leaving common mental illnesses undiagnosed and untreated. Additionally, researchers identified a need for culturally appropriate services and an increase in mental health literacy so as to promote “help-seeking behavior, stigma reduction, and reducing... human rights abuses” (Petersen & Lund, 2011, p. 1).

The 2017 Southern African Association for Counselling and Development in Higher Education (SAADCHE) annual report described mental health in higher education from a regional perspective. Each region reported their member institutions, regional chairperson, and regional activities as well as their finances and concluding remarks. For example, the Western Cape province listed six universities and colleges, two regional meetings (with proceedings), two financial accounts, and conclusions. However, not all of the provinces appeared to be functioning at the same capacity. The KwaZulu-Natal region did not list any universities, listed the SAACDHE annual conference as its only meeting, and listed no financial information or conclusions. The Swaziland and Botswana pages of the report had nothing to report besides the name of the regional chairperson (Southern African Association for Counselling and Development in Higher Education, 2017). Thus, the leading organization for counseling in higher education within southern Africa is either entirely not functioning in some areas where there are universities, or they are functioning but are not reporting their activities and not being held accountable for their actions.

One study reviewed the effects of the Mental Health Care Act 17 of 2002 (MHCA). The act was promulgated in 2004 and is considered very progressive in terms of mental health legislation. Ramlall (2012) found that, while the MHCA did shift the emphasis of care from psychiatric institutions to general hospitals, integration of services has been hampered by infrastructure constraints as well as shortages of mental health professionals. Primary health services seem to focus mainly on maintaining treatment of the mentally ill through pharmacological methods instead of focusing on “health promotion, disease prevention, and rehabilitation aspects of care” (Ramlall, 2012, p. 1). Another study researched challenges at different levels of care within the mental health field. The study found that, at the primary care level, staff training and supervision in the detection of common mental illnesses, and community-based psychological rehabilitation programs for those with severe mental illnesses were pressing challenges (Lund, Petersen, Kleintjes, & Bhana, 2012). The same study found that the secondary care level struggles with investment in 72-hour observation facilities at pre-

designated hospitals. Tertiary level challenges included lack of continuity of care from primary and secondary levels, leading to revolving door patterns of care.

## Methodologies:

### *Design Overview*

This study utilized a mix methods approach, which included a survey, focus groups, and interviews with both professional and non-professional people. The survey was distributed to as many students as possible (in person and online) and gathered quantitative data on topics like stress levels, causes of stress, and stress coping methods. The interviews and focus groups gathered qualitative data by asking participants about their perceptions of university student stress levels, causes of stress, stress-reducing resources, and possible future improvements to those resources. The quantitative and qualitative data were collected and analyzed via Google Forms and Microsoft Excel.

### *Survey*

#### *Recruitment*

The survey sampled from a population of university students near the KwaZulu-Natal (KZN) area. There was not any intentional selection of gender, ethnicity, or socioeconomic status. The researcher aimed for a minimum sample size of thirty to be able to find statistical significance. A local contact was used to gather university students from the Cato Manor neighborhood. The Cato Manor survey day took place on a Monday, around four in the afternoon. Around 20 people arrived at the local church, where the survey took place. After designating which participants were or had been university students, those participants took the survey. Average survey completion time was around 30 minutes. Additional contacts were used to implement a snowball method for online survey distribution. Finally, the researcher's advisor distributed the survey to psychology students at UKZN Pietermaritzburg via URL.

### *Survey Structure*

The survey itself had three sections (see Appendix 1 for actual survey). The first section asked basic demographic questions: age, gender, and race. It was followed by a more focused demographic section asking if participants were currently university students or if they had previously been university students. If so, they were asked to note which university they attended. Respondents were asked to list their highest level of education obtained (matric, bachelors, masters, etc.) and if anyone else in their family had attended university. Survey

participants were also asked what kind of area they were born in (urban, suburban, or rural). Finally, the survey included financial demographic questions.

The financial questions were very difficult to choose, aiming to accurately assess socioeconomic status (SES) in very few questions. Shaving consulted the literature regarding how to assess SES, and the method chosen was a self-perceived wealth question. This question asked participants to identify which category they felt best described their household. The options were organized on an ordinal scale from “very poor” to “very wealthy”. This method was chosen because it was simple and easy to understand for second language English speakers, and additionally because it also asked respondents about their own perceptions, similar to the questions asked in the next section (Statistics South Africa, 2009).

The second section of the survey was about perceived levels of stress. This was also a difficult section to create since stress can be a very subjective and dynamic entity. There have been many studies conducted surrounding stress levels, but the researcher desired a short, simple test that could be acquired free of charge and had high reliability and validity. Data regarding stress levels was gathered using the Perceived Stress Scale (PSS), a widely used, ten question test to assess perceived stress (Cohen, Kamarck, & Mermelstein, 1983). This test was chosen because it met the criteria outlined by the researcher: it was easy to use, and had been used successfully with university students, showing reliable, valid results in Iran, Greece, Japan, Spain, Turkey, Portugal, China, Thailand, and France (Khalili, Sirati, Ebadi, Tavallai, & Habibi, 2017; Andreou, Alexopoulos, & Lionis, 2011; Lee, 2012). The results of the PSS produced a composite score for each participant. Each of the ten questions asks the participant to rate different perceptions on a scale of zero to four. Zero means the participant never feels that way, four means that the participant feels that way very often. Some of the questions are reverse coded, and then all ten questions are summed together. The minimum and maximum scores possible on the test are zero and 40, respectively. A person with a score of zero would perceive their own stress as extremely low, while a person with a score of 40 would perceive their own stress as extremely high. The PSS produced quantitative data on stress levels but was not as revealing about the qualitative elements of participants’ stress.

The third section focused on causes of stress and destressing methods. After researching previous studies which inquired about causes of stress and stress coping methods in university students, common answers were compiled and listed as options. Participants were asked to circle

all answers that applied to them during their time as a university student. There was also an option listed that stated: “I do not feel stressed”. This third section gave important clues about the qualitative information surrounding stress in university students, and interviews and focus groups expanded that qualitative information.

That Cato Manor contact was also used as a pilot for the survey and interview questions. The survey was adapted according to feedback from the ISP advisor and Cato Manor contact.

### *Interviews*

The interviews conducted with professors and/or social workers from universities lasted about 30 minutes on average. They were semi-structured in format and focused on the same topics included in the survey (See Appendix 2 for actual interview topics). The lack of structure in the interview style allowed for more flexibility in conversation when appropriate. The professional interview results were compared and contrasted with the results from the student survey and interviews. It is also important to note that none of the surveys, interviews, or focus groups took place on university campuses, but rather at the Cato Manor church. Professional interviews were conducted either in person at a local coffee shop, on Skype, over the phone, or via email response.

### *Recruitment Process*

Participants for interviews and focus groups with students were chosen by the local Cato Manor contact and the only selection criteria was university student status. As for the professional staff member interviews, there was not any particular selection criteria beyond mental health expertise. The researcher aimed to interview both men and women, people of different ethnicities and ages, and both professors and social workers/psychologists. In addition, there was an attempt to interview mental health workers who did not work for a university but may have had university students as clients. The researcher searched through the psychology department of the University of Kwazulu-Natal (UKZN), as well as the mental health service employees. After noting any persons who had done research in areas related to mental health of university students, the researcher sent out emails regarding interview availability. Professors and mental health service employees that replied were interviewed in person, via phone call, or via email. The same process occurred on a smaller scale for the University of Cape Town (UCT),

Durban University of Technology (DUT), and University of Johannesburg (UJ). Interviews were not recorded but the researcher typed or hand-wrote notes for later reference.

### *Interview Structure*

Interviews and focus groups began with basic introductions and explanations of research topics. The interview had four topics, beginning with the current status of university students in South Africa. The researcher asked the participant(s) if they believed that South African students were stressed at all, and, if so, how stressed. That question was followed by a question asking if participants thought certain subgroups (demographics) of students were more stressed, and, if so, which groups and why? The second topic inquired about causes of stress and specific times that university students experienced high levels of stress. The following section asked about mental health resources available to students and the perceptions surrounding the use of those resources. This section was the largest of the four, and asked five successive questions: coping methods/available resources, impacts of stress on students, and accessibility, acceptability, and affordability of mental health resources. The word “resource” and “service” were often used interchangeably during discussion. Finally, the fourth section asked about possible improvements for resources in the future. After these topics were covered, the researcher asked participants if they had anything else they would like to say, so as to allow an unstructured response if the participant(s) wished to do so.

Mental health can often be complex and multi-dimensional. For example, the lack of university preparation in the further education phase could lead to students being underprepared for university-level workloads, which could lead to continued poor academic performance, which could lead to stress and further mental health issues. Therefore, the interviewer aimed to ask about causes and effects to at least two degrees of removal from the origin (in other words, if a participant said that poor marks caused stress, the researcher would ask about what caused the poor marks). To accurately describe the mental health problems in university students, one must first understand the larger situation. One must be able to see the “big picture”. To better address those problems, one must acknowledge that there may be underlying situations leading to those problems. For example, if South African students are feeling stressed by the academic challenges of university life, the underlying problem may be inadequate preparation. This information can

then be used to inform a better solution, like increased university preparation focus during the earlier education.

### *Data Collection and Analysis*

#### *Survey*

The data from the paper surveys and online surveys was collected and coded on a Microsoft Excel spreadsheet. Then, the researcher identified major trends. Depending on the categorical or continuous nature of the variables, different analyses were conducted, like histograms to show frequency, T-Tests for comparing group means, and Pearson's R for correlation. All of these analyses helped the researcher to understand the status of mental health in South African university students, as well as the underlying causes and effects of that mental health (or lack thereof).

#### *Interview and Focus Group*

Interview and focus group data was collected by the researcher via hand-written notes. As the conversation progressed, the researcher wrote down general answers to the questions and anything that the researcher found to be particularly interesting or possibly quotable. This qualitative data was then thoroughly reviewed and thematically analyzed for trends and patterns. The data was also used to support, contrast, or further explain quantitative data trends.

#### *Limitations*

There are several limitations in the methodology for this study. Firstly, sample sizes were not always large enough to test for statistical significance. Secondly, the survey participants were from the same area, of similar SES, and of similar ethnicities. This produced results that were not highly generalizable to the rest of the South African university population. Thirdly, the focus of study on the University of KwaZulu-Natal (UKZN) students resulted in conclusions that cannot be generalized to other universities. In addition, many of the students surveyed at UKZN were chosen in connection to the psychology department/major. Thus, they may have had some biases related to their previous knowledge about stress and its effects. Some studies have focused specifically on the coping methods of psychology students in comparison to non-psychology students and found significant differences (Nel & Roomaney, 2015). Fourthly, professional

interviews were conducted in a variety of different settings that could influence the responses received. Additionally, the opinions expressed by those professionals were not necessarily transferable to the opinions of professionals at other universities or from other nations. Finally, culture and language barriers could have prevented accurate understanding between participants and the researcher on surveys, focus groups, and interviews. The researcher was from a different nation with a different culture and therefore, some biases are inherent. The survey and all of the interviews were in English. The researcher considered translating all questions to isiZulu but was advised by the local contact that this could lead to more confusion due to improper translations and/or lack of an ability to translate certain phrases. Additionally, interviews and focus groups were not recorded or transcribed. This produced lower quality data but was necessary due to time constraints.



## Ethics:

The researcher spent ample time considering how to go about this study in the most ethical way. The responsibility to respect those people being studied, as well as their nation, their culture, and their opinions was taken very seriously. The researcher did not have any conflicts of interest. The interests of the people being researched were prioritized, even over the success of this study. Dignity and privacy for all people involved in the study was an essential part of the research process. Participants were always notified of their right to not answer questions and not participate entirely in the survey, interviews, and focus groups. Participants were made aware of the measures being taken to safeguard their anonymity. No names were recorded for non-professional participants and no participants' individual answers were shared with anyone else. While names were recorded for professional participants, their names were only included if they were directly quoted, and consent to do so was always asked for prior to use. All participants were also made aware that the researcher was a student and that the information was being used to help inform this study and its future recommendations. The researcher tried to be as clear as possible about the aims of the study. Additionally, the researcher made sure to be clear that there would be no compensation for participation (besides the Cato Manor Survey Day participants, who were paid by SIT), and made sure to thank participants for their time and for sharing their knowledge.

Additionally, the researcher made sure that another SIT program member knows their location at all times, did not intentionally interview participants who may have been a danger to themselves or others, did not conduct interviews in dangerous places, and educated themselves on the proper referrals for people who are mentally ill or distressed in emergency situations.

In terms of positive and negative consequences of participation, participants were informed prior to participation. Positive consequences lie in their potential for improvement of future mental health resources. Negative consequences mostly involved possible psychological trauma from thinking about stress/stressful situations. The researcher attempted to mediate these consequences by providing professional resources, like a 24/7 mental health crisis hotline. Limitations caused by the researcher's personal and cultural values were addressed in the limitations section of the methodology section. Furthermore, the researcher made every effort to accurately cite all sources used to inform this study.

In addition, the standard SIT consent form for adult respondents in English was used for all survey and non-professional interview participants. This form (See Appendix 3) first gave a brief description of the purpose of the project. That was followed by a rights notice, ensuring participants that the study had been reviewed and approved by a local review board and that they were free to end their participation at any time (until the ISP period ended, around the 8<sup>th</sup> of December) and for any reason. Their privacy, anonymity, and confidentiality were addressed, and participants were informed that they would receive no gift or direct benefit for participation. Finally, they were asked to sign and given contact information if they had further questions/concerns. The SIT consent form was adapted by the researcher specifically for this study to include a section addressing mental health concerns. It noted that mental health is a very serious issue and should not be taken lightly. Participants were informed that if at any time they felt that they did not want to continue, they should stop immediately and consider contacting a mental health professional. Phone numbers were provided for reference. The local review board ethical clearance form can be found in Appendix 4.

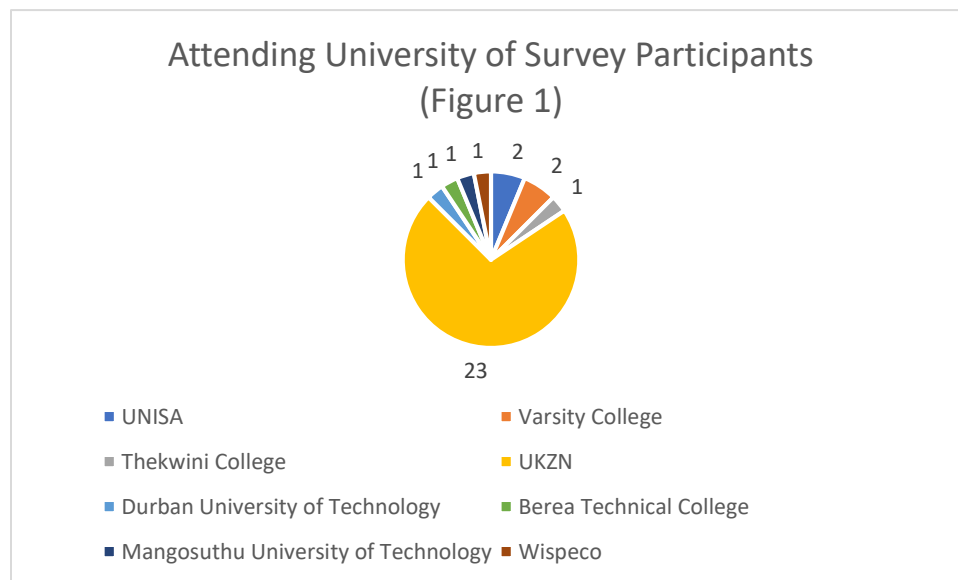
## Findings:

### *Survey Results*

The survey yielded mixed results. Although there were enough responses in total to be statistically significant, some demographic groups had such a small sample size that they could not be used in statistical analysis. Nonetheless, some trends were present. Overall, there were 42 responses. 20 were from the Cato Manor survey day, and only 11 of those 20 were used in the analysis because the other nine were not and never had been college students. The remaining 22 responses came from an online survey distributed to UKZN students by the researcher's advisor. One of those 22 online responses was from a 17-year-old student and was thus not analyzed. Therefore, 32 responses were analyzed in total.

### *Demographics*

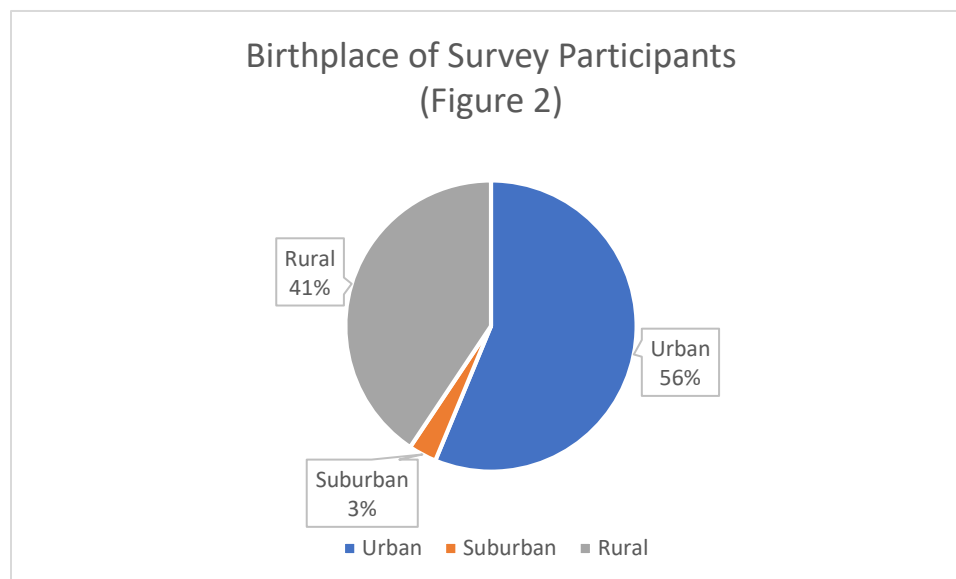
The age of respondents ranged from 18-31 and the mean age was 21.8 (standard deviation [SD] = 3.34). The median and mode ages were 21 and 25, respectively. The sample was 31.25% male, 62.5% female, and 6.25% of respondents chose not to respond. Of the 32 total responses, 81.25% said they were Black, African, Zulu, or some combination of those three words. 15.63% of respondents said they were Indian, and 0% said they were White or Coloured. One participant chose not to respond to the race demographic question. Only seven people were not currently college students but had been previously. Survey participants attended eight different colleges, a majority of whom went to UKZN (see Figure 1).



In terms of education, six participants only had a matric, and another 21 had a matric with bachelor's pass. One respondent had their certificate, one had their bachelor's degree, and one had their honours degree. One respondent did not answer the education level question and one respondent gave an answer that noted a level of education only used in another country, but that was similar to the South African matric with bachelor's pass level of education.

The first-generation university student question was coded in multiple ways. The first code was a simple zero if no one else in the family (sibling, parent, or grandparent) had ever attended university, and a one if anyone had. The second code denoted who had attended university, again coding a zero for no one else, a one for a sibling, a two for a parent, or a three for multiple other family members. This allowed for some flexibility on the definition of a "first-generation student". 34.38% of respondents were the first person in their family to attend university. However, 59.38% of respondents were either the first person or had just a sibling attending university, thus still being part of the first-generation of their family to attend university. Only 11 students had had more than one family member attend higher education.

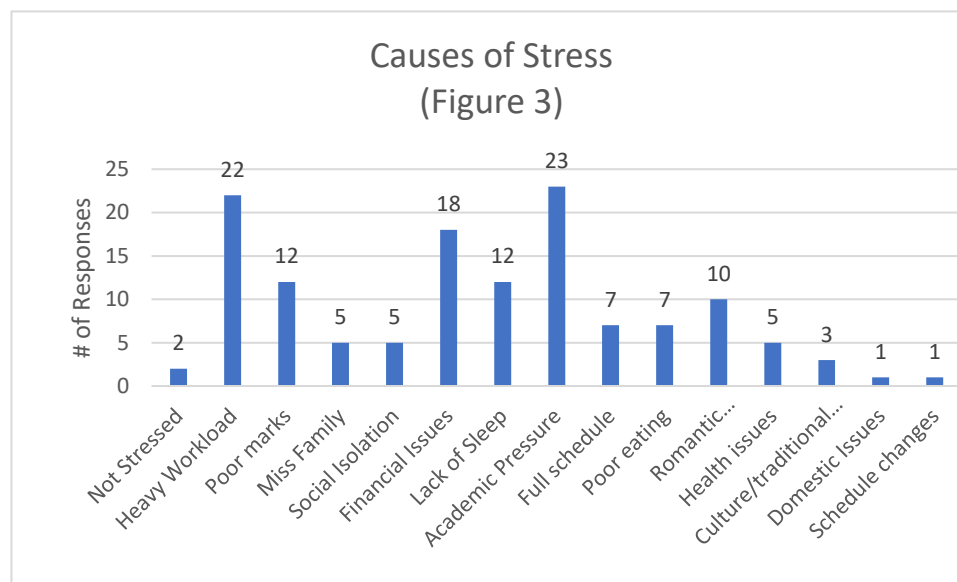
Out of the 32 survey participants, 13 identified themselves as having been born in a rural area, 18 from an urban area, and one from a suburban area (see Figure 2).



Responses to the household income question were almost entirely "average" (84.38%). One participant self-identified as "very wealthy", one as "wealthy", two as "poor" and one as "very poor". In addition, only ten participants responded that they had any form of employment.

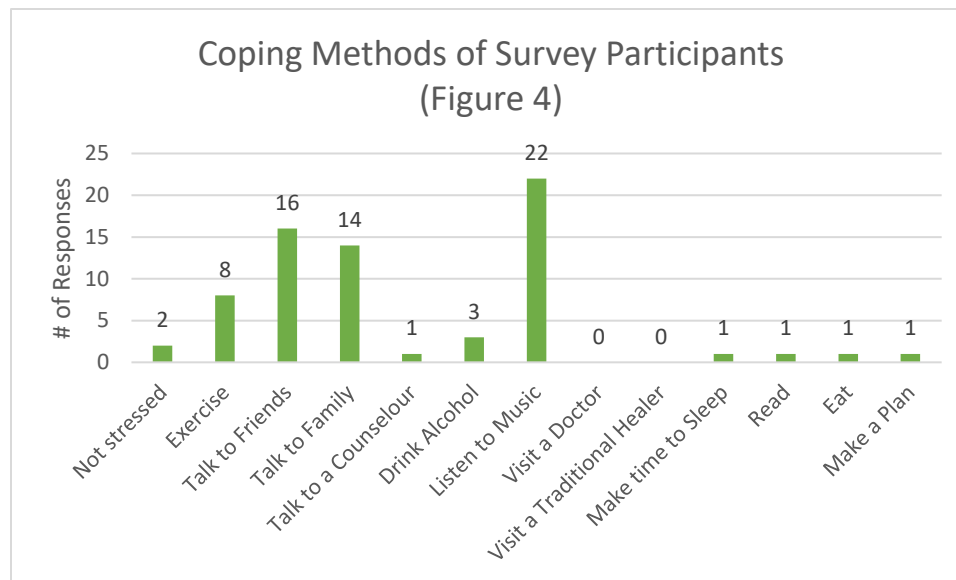
### *Perceived Stress Scale*

As for the PSS results, each participant received a score by summing the values of their answers to the 10 questions. The scores ranged from eight to 37 (the minimum and maximum scores possible are zero and 40, respectively). It is important to note that the PSS does not have any specific score that denotes any form of mental illness or lack thereof. The higher the score, the more stressed the respondent. The average score was 22.41 (SD=7.28), the median was 23, and the mode was 19. When asked what caused them stress, participants noted many issues but the most commonly selected causes were academic pressure (23), heavy workload (22) and financial issues (18). Figure 3 shows the distribution of responses.



On average, participants selected four answers for causes of stress. The highest number of stressors chosen was nine, the lowest was none (meaning that the participant did not feel stressed).

Additionally, participants were asked how they choose to make themselves feel better when they are feeling stressed. The most common responses were listening to music (22), talking to friends (16), and talking to family (14). Figure 4 shows the distribution of responses.



The average number of methods used to cope with stress was two, with a minimum of zero methods and a maximum of four methods.

The researcher chose the T-Test for two independent means to test most of the demographic information in relation to PSS sum scores. There were no significant correlations found between demographic information and stress levels. These demographics and their respective t-values and p-values can be seen in Table 1.

Table 1

| Demographic              | Gender | Race  | Student Status | Education Level | First Gen Student | Birth Area | Perceived Household Income | Employment Status |
|--------------------------|--------|-------|----------------|-----------------|-------------------|------------|----------------------------|-------------------|
| T-value                  | -1.34  | -1.76 | 1.65           | 0.056           | 1.35              | -0.025     | N/A                        | -0.056            |
| P-value                  | 0.19   | 0.089 | 0.11           | 0.58            | 0.19              | 0.80       | N/A                        | 0.58              |
| Significant at $p < .05$ | No     | No    | No             | No              | No                | No         | N/A                        | No                |

Due to the continuous nature of some of the variables, three correlational analyses were conducted. These three analyses were between age and PSS score, PSS score and number of stressors, and PSS score and number of coping methods. Results can be seen in Table 2.

Table 2

| Variables                 | Age + PSS | PSS + # Stressors | PSS + # Coping Methods |
|---------------------------|-----------|-------------------|------------------------|
| R-Value                   | 0.02      | 0.30              | 0.09                   |
| P-Value                   | 0.91      | 0.09              | 0.64                   |
| Significance at $p < .05$ | No        | No                | No                     |

### *Interview and Focus Group Results*

For the more qualitative data, the researcher noticed several trends among interviewee responses. There was a total of five professional interviews, three non-professional interviews, and two non-professional focus groups of five participants each. Although far more than five professionals were contacted, only five responded and/or were available during the researcher's two-week window of availability. All five professional interviews were done either over the phone or via Skype video call. The professionals were either from UKZN or DUT and were either professors, graduate students, or social workers. Non-professional interviewees and focus group members were either current students or had been students previously. No other demographic information was collected for interview and focus group participants.

The first interview question asked participants if they thought that university students were stressed. Answers to the first question were resoundingly affirmative. In fact, some participants thought this question wasn't worth asking because the answer was "so obvious" (Participant 2, *Personal Communication*, 2017). Some interviewees felt that university students were much more stressed than the general population of South Africa, while others said that they were equally as stressed as the general population, but not more so. Additionally, while there was no question inquiring about stress levels of South Africans as a national population, several interviewees felt that South Africans were more stressed than people from other nations. Responses to the second question of the first section (asking about more stressed demographics like low SES, rural birthplace, and first-generation students) varied based on how the interviewee interpreted the question. Some interviewees seemed to think the subgroups mentioned were in reference to certain majors. Those responses mentioned engineering, mathematics, medical, and law students as being particularly stressed. Other interviewees interpreted the question more as it

was intended, mentioning students of low socioeconomic status, students born in rural areas, first-generation students, first-year students, and students who received poor marks as subgroups that might be more stressed.

The second section of the interviews asked about causes of stress and answers generally involved the causes mentioned in the second to last question of the survey. Financial problems, missing family, academic pressure/heavy workload, and finding places to live were common themes. One stressor that remains unique to South African students is the protest action, like #FeesMustFall. One student noted that participating in these movements was like “losing an entire semester”, and that students have to work extra hard to catch up afterward (Participant 3, *Personal Communication*, 2017). In addition, several responses mentioned lack of academic preparation from previous education and difficulty making the transition to university lifestyle. The second question of the second section asked about specific times when university students are more stressed. Almost every single response mentioned the finals/exam period and a large majority of responses also mentioned the beginning of the year when students are trying to register for classes, pay tuition fees, and find accommodations. A few interviewees mentioned the time directly after finals when students receive their marks from finals as being particularly stressful.

The largest amount of variation in responses was in the third section. This section inquired about participants stress coping methods. One common response was talking to family and friends. Another common response was resorting to various substances, especially alcohol. The researcher, however, did notice a trend where the professional participants noted the use of substances by students earlier in their list of possible coping methods, while non-professional participants tended to mention the use of substances towards the end of their list, if at all. Several participants mentioned the use of counseling or clinic services as a coping method. The second question of the third section inquired about how stress impacted students. Responses varied but the general notion was that stress drives students into a cycle of negative outcomes. As students become stressed they struggle to focus on their studies and their health, leading to poor health and poor marks, which further stresses the students. One professional interview participant put it into perspective: “Students suffer in silence, trying to deal with their struggles themselves. This goes on until they break down, which has very detrimental effects on their grades and their health” (Participant 4, *Personal Communication*, 2017). One can easily see how the cycle



continues, especially when a student resorts to coping methods like substance use and partying. The third, fourth, and fifth questions of the third section surrounded accessibility, acceptability, and affordability of mental health resources. Participants often addressed all three of these topics after only being asked about one of them. In response to the accessibility, most professionals and non-professionals said that services were available on campus (so no transport was necessary), but that some students might not be aware of the available services. All services were reported to be free of charge for students, thus they are easily affordable. However, the acceptability of using these services seemed to be a controversial topic. While some students were quick to say that it was easy to go and visit mental health services, others admitted that it might be challenging to use the services due to the stigma surrounding mental illness.

The fourth and final section of the interviews and focus groups was about the future improvement of mental health resources. Answers in this section tended to be about increasing resources like the number of counselors and psychologists on staff. Some students voiced that they wanted more social events on campus to raise awareness about available services and to reduce the stigma surrounding the use of those resources. Although it was not directly related to improving the mental health resources themselves, a few respondents felt that universities should focus their resources on meeting students' basic needs. One respondent said, "universities must address the students' basic needs. Once shelter, food, transportation, and basic school supplies are addressed, then and only then can students seriously face the challenges of the university environment" (Participant 5, *Personal Communication*, 2017).

## Analysis:

This study sought to answer the following questions:

- What are the perceived stress levels of KwaZulu-Natal university students?
- What causes stress in KwaZulu-Natal university students?
- How do KwaZulu-Natal university students cope with stress?
- What is the relationship between demographic variables and student stress levels?
- When do students feel most stressed?

### *Perceived Stress of KwaZulu-Natal University Students*

As stated in the findings section, each participant received a score by summing the values of their answers to the 10 questions. The scores ranged from eight to 37 (the minimum and maximum scores possible are zero and 40, respectively). It is important to note that the PSS does not have any specific score that denotes any form of mental illness or lack thereof. The higher the score, the more stressed the respondent. The average score was 22.41 (SD=7.28), the median was 23, and the mode was 19. In order to compare university students to the surrounding population, the researcher used the PSS scores from this study and the average score found by Hamad et al. (2008). Among low-income adults (n=257) around the Cape Town, Port Elizabeth, and Durban areas, the mean PSS score was 18.6 (SD=6.7). This analysis produced a T-value of 2.91 (p=0.01). This result was significant at  $p < .05$ , meaning that the perceived stress levels of university students were significantly higher than the perceived stress levels of low-income adults from nearby areas.

Although responses to the first interview question were overwhelmingly affirmative, the data analysis results did not support the conclusion that university students were particularly stressed. In addition, the qualitative data displayed that many of those interviewed thought several demographic groups would be more stressed. However, the quantitative results contradicted that prediction. These results could be attributed to low sample size, but if the results were accurate, that would imply that students of all kinds were equally stressed. This is discussed more below.

*Sources of Stress in Kwa-Zulu Natal University Students*

On average, participants selected four answers for causes of stress. The highest number of stressors chosen was nine, the lowest was none (meaning that the participant did not feel stressed). The answers from the second section of the interview did match the stressors selected by survey participants quite well, supporting the conclusion that the causes of stress in university students mainly surround financial difficulties and academic pressure/workload. Bojuwoye (2010) found similar results, noting that the most common stressful experiences for South African university students were related to finance and the demands of the university environment. Since many interviewee responses noted that finals are the most stressful time of year, one could assume that the time at which this study was conducted had some influence on the PSS scores. Future research should compare the results found in this study with a similar study conducted at another time of year, particularly the beginning of the term, the middle of the term, and after the end of term when students have received their final test marks.

*Coping Strategies of KwaZulu-Natal University Students*

The third section of the interviews was difficult to compare with survey data, but it was interesting to see how some of the coping methods were selected by survey participants but not mentioned by interview and focus group participants, and vice versa. For example, interviewees often mentioned alcohol as a coping method, but survey results showed only three people selected alcohol as a coping method. The most common answer was listening to music. Future research could observe listening habits of students, noting specific genre and artists that students like. Furthermore, universities could put resources towards providing music streaming at reduced costs to students as a method to combat stress. Another interesting part of the qualitative data analysis was the frequent answer that mental health services were highly affordable. This has two implications: firstly, that students and professionals alike were highly aware that mental health services offered on campus were free of charge. Secondly, that students who might be struggling financially need not worry about being unable to use mental health resources due to lack of funds. In contrast, many interview and focus groups responses noted that university mental health services were underfunded and overworked, making them unavailable at times. This led to a common recommendation for improvement: increasing the number of counselors employed to accommodate the large student population. One professional interviewee noted that, according to standard guidelines for university psychological services, there should be one

psychologist per 1,500 students. Yet, UKZN Pietermaritzburg has around 15,000 students and only six full-time psychologists (Participant 1, *Personal Communication*, 2017). Additionally, there was a high frequency of affirmative responses about the stigma surrounding usage of mental health services. Many participants suggested more social events hosted by the university to help increase awareness of mental illness and decrease the stigma of receiving psychological counseling. This is a similar recommendation to that of Lawrence (2009), which stipulated that the best way to demystify and destigmatize mental health issues was to educate people about mental health disorders and management thereof. This would further facilitate openness and sharing of these problems, leading to society's acceptance and understanding of those struggling with psychological disorders.

The ideas for improved mental health resources from the fourth section of interviews and focus groups have been interwoven with the researcher's suggestions in the final section of this study.

#### *Demographic Variables and Students' Perceived Stress*

For gender demographics, the t-value was generated by comparing male and female scores. One participant's information was not used as they preferred not to specify their gender on the survey. The results did not show any significant difference at  $p < .05$ , meaning that neither gender perceived themselves as significantly more or less stressed than the other gender. This study's finding (or lack thereof) is most likely due to low sample size since many other studies have shown significant differences in PSS scores (and other stress test scores) by gender (Hamad, Fernald, Karlan, & Zinman, 2009; Bojuwoye, 2002).

For racial demographics, the T-test was used to analyze Black participants' versus Indian participants' PSS scores since those were the only two races reported in survey results. The T-value could be considered significant at  $p < .1$ , meaning that there was a significant difference between the PSS scores of Black and Indian participants to some degree of certainty. However, this finding could be unreliable due to the low sample size of Indian participants ( $n=5$ ). One study found a similar trend in stress level differences among those who were of more than one race and those who were not (Bojuwoye, 2002).

The next demographic data set to be analyzed was current versus former university students. That analysis produced a non-significant result at  $p < .05$ . However, when the stress levels of former students were compared with the study's population mean ( $\mu=22.40$ ), the

analysis produced a t-value of -1.97 ( $p=0.09$ ). This result suggested that former students were more stressed than their current student counterparts. Upon further investigation, the researcher noted that all participants in the former student category were still only at the matric or matric with bachelor's pass education level. Thus, all former students had dropped out of university before completing their bachelor's degree. One possible explanation for this phenomenon is that those participants dropped out because they were more stressed than other students. Another explanation could be that those former student participants look back on their time as students and view it from a different perspective than the current students, creating a bias due to their retrospective point of view.

To analyze education level, the sample was split into two groups: those who had only matric level education obtained, and those who had anything above matric level (matric with bachelor's pass to master's degree). That analysis produced a non-significant result at  $p < .05$ . This contrasted the study done by Bojuyowe (2010), which found significantly increased scores on the Center for Epidemiologic Studies Depression Scale (CES-D) among those of lower educational attainment.

The first-generation status was analyzed three different ways, as mentioned in the findings section. The first analysis was between those who were truly the first in their family to ever attend university versus those who had had anyone else attend university. This analysis produced a non-significant result. The second analysis split the sample into those who had been the only family member or those who had only had a sibling attend university versus everyone else. That analysis produced a t-value of 0.99 and a p-value of .33, highly insignificant at  $p < .05$ . Finally, the third analysis split the sample into those who had had multiple family members attend university versus those who had only had one family member or no one else attend university. That analysis produced a t-value of 1.19 and a p-value of .24. None of these three analyses produced significant results at  $p < .05$ , meaning that first-generation students (regardless of definition) were no more or less stressed than other students according to this sample. Although this study did not inquire in particular detail about first-generation students' experiences, other studies have shown that first-generation students tend to disclose their stressful experiences to different people and in different ways than traditional students (Barry, Hudley, Kelly, & Cho, 2009). In a study of second-generation Latino students, researchers found

that one in four reported high levels of depression and suicidal ideation. The rate of depression and suicidal ideation also correlated with acculturative stress (Hovey & King, 1996). In addition, one previous study found that first-generation students were less involved, had less social and financial support, and did not tend to use active coping strategies (Mehta, Newbold, & O'Rourke, 2011). These first-generation students also reported lower social and academic satisfaction, not to mention lower grade point averages. Another study found that students with at least one professionally educated parent had lower perceived stress than those students with lower parental education levels (Finkelstein, Kubzansky, Capitman, & Goodman, 2007). The aforementioned findings imply a need for special attention to the mental health of first-generation students, especially with those students who come from different cultures.

In addition, PSS scores were analyzed by students' birth area. The sample was split into those born in urban areas versus those born in suburban or rural areas. This analysis produced a non-significant result at  $p < .05$ . It is interesting to note that the birthplace question produced nearly 50/50 results between rural and urban responses. Further research should inquire how people define rural, suburban, and urban areas, especially since only one respondent self-identified as having been born in a suburban area. Very few other studies were found to have observed the differences between rural and urban students' stress levels. One recent study from China found that students with rural or township family locations exhibited a higher prevalence of severe uncertainty stress (Yang, Yang, Yu, Cottrell, & Jiang, 2017). However, some other studies have shown similar results: that the self-reported stress levels and coping methods were not different between those students from rural and urban areas (Elgar, Arlett, & Groves, 2003).

The researcher planned to analyze differences in group means between income levels, but the sample sizes were too small. Only five participants denoted any status other than "average" as their household's income level. Although other studies have used different ways to assess SES, many have found significant differences in stress levels between students of different SES (Hamad, Fernald, Karlan, & Zinman, 2009; Yang, Yang, Yu, Cottrell, & Jiang, 2017). To make matters worse, students from low-SES backgrounds were more likely to report experiences of classism on interpersonal and systemic levels (Backhaus, 2009). Generally speaking, those students with lower SES had higher levels of stress, though one study found that students with

high optimism partially mediated their stress levels, regardless of SES (Finkelstein, Kubzansky, Capitman, & Goodman, 2007).

The final T-Test conducted was on employment status, splitting the sample between those who had any form of employment (part-time or full-time) and those who were unemployed. This analysis produced a non-significant result, which supports the conclusion found in some other studies that found no significant relationship between the number of hours worked and reported stress levels of students (Schroeder, n.d.). However, there are other studies that have found significant relationships between employment status/income stability and stress levels (Keady, 1999; Hamad, Fernald, Karlan, & Zinman, 2009). One study found that students who worked a higher number of hours also consumed more alcohol (Butler, Dodge, & Faurote, 2011).

A few variables were analyzed for correlation with stress levels due to their continuous nature. Pearson's Correlation analysis was used for age and PSS sum value. This test found an R-value of .02 ( $R^2 = .00$ ). This result was not significant ( $p=0.91$ ). Other studies have shown similar lack of significant correlation in age and stress levels (Bojuwoye, 2002; Govender, 2015). Correlation analysis was also used for PSS sum score and number of stressors. The researcher hypothesized that those people with higher PSS scores would also have a higher number of stressors. However, correlation analysis produced an R-value of 0.30 between PSS sum value and the number of stressors. This led to a p-value of .09 which was not significant at  $p < .05$ . It is also worth noting that this effect was most likely influenced by participants' conscious thinking about how stressed they were directly before noting what parts of their life stressed them out. In addition, a correlation analysis was conducted between PSS sum score and number of destressing methods. One might have predicted that those with more coping methods might have lower PSS scores. Alternatively, one might have hypothesized that those with lower PSS scores had a lower number of destressing methods since they were less stressed. Regardless, the analysis produced an R-value of 0.09 ( $p=0.64$ ). This result was not significant at  $p < .05$ , but even if it had been significant it would have meant that there was a very weak positive correlation between the two variables.

Returning to the demographic information, some trends had interesting implications. Some previous studies have noted differences in stress between first-year students and students

later in their university career (Govender, 2015). Unfortunately, the researcher did not ask survey participants about which year they were in, but one can assume that students aged 18-19 were most likely in their first year, while those aged 20 and above were not likely to be in their first year. Comparing the means of these two groups also produced results that were not significant at  $p < .05$  ( $t=1.30$ ,  $p=0.20$ ).

In addition, there were no significant relationships between any of the demographics and specific stressors or specific coping methods. This supports the findings of Govender (2015), which included year of study, age, gender, home language, and living situation as demographic categories, none of which had significant relationships with specific stressors or coping methods.

Another notable finding was that more than 80% of respondents identified their household income level as “average”. In retrospect, it seems that the SES question should have been more specific. Leaving such an important demographic question to the subjective and self-identifying nature of that question was bound to produce such results. Nonetheless, it is interesting that so few responses noted anything other than average. If this study was conducted on a larger sample of university students or a larger sample of the general population, would a majority of people continue to identify their household’s income level as average? Does that self-identification match the actual income levels of the larger population, or is it common to see people of lower, middle, and upper-class SES identify as “average”?



## Conclusions:

There were several important conclusions to draw from this study, for both the future of the researcher and the futures of South African university students. For the researcher, this study was an important lesson on how to conduct high-quality research. Proper research must be done well in advance of the study to understand the current state of affairs in any given context. Additionally, research into previous studies' methods can provide important insight into the advantages and disadvantages of particular strategies, like assessment tools, data collection, and data analysis. Furthermore, understanding the results of previous studies can significantly change the expectations of the researcher as well as the desired topics of inquiry and the methods used. In the future, the researcher will take more time to understand similar studies done previously.

For the future of South African university students' mental health, the most important conclusion to draw is that there is more work to be done. Although this study's statistical analyses did not provide significant results, the data trends suggested mainly financial and academic sources of stress. Additionally, students tend to listen to music and talk to family and friends to cope with stress. If universities wish to have happier, more successful students, they should put more funding and resources towards mental health services as well as academic success services. Future research should continue to observe university students' stress levels, stressors, and coping methods. Furthermore, that future research should be used to better understand why university students are stressed and to create improved mental health services.

## Recommendations for Further Study:

- Increase funding and resources to university mental health resources
- Continue to research stress levels in university students, as well as the causes and coping methods used
- Increase awareness of mental health resources
- Decrease stigma surrounding use of mental health resources
- Repeat this study (in parts or in its entirety) with higher sample size, remaking demographic questions where applicable
- Expand this study to other nations, consider comparing results

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## Appendices:

### *Appendix 1: Survey*

#### Perceived Stress of University Students Survey

The purpose of this project is to survey university students and interview various mental health professionals from the Durban region of South Africa. The data will be analyzed and used to better understand the current status of South African university students' mental health, as well as the causes of their stress levels. In the future, such information can be used to create better stress prevention strategies and to reallocate resources where they are needed most.

You have the right to refuse to participate in parts or the entirety of this research at any time during their participation. If you wish to refuse participation after already participating in surveys, focus groups, and/or interviews, the deadline to do so is November 30th, 2017. Your responses may be anonymously published online at a later date.

Additionally, these questions are related to sensitive topics. Mental health is a serious issue and should not be taken lightly. If you feel particularly distressed or triggered by participating, you should contact a mental health professional and immediately seek help.

**LifeLine Durban has a 24-hour crisis helpline here: 031 312 2323**

Please circle the answer which applies to you.

1. Age \_\_\_\_\_
2. Gender (Circle): **M** **F**
3. Race \_\_\_\_\_
4. Are you currently a student? Yes No
5. If your answer was Yes to question 4, please name the college/university you are attending. \_\_\_\_\_
6. Have you ever attended college/university? Yes No
7. If your answer was YES to question 6, please name the college/university.  
\_\_\_\_\_
8. Level of education obtained
  - a. Matric
  - b. Matric with Bachelor's Pass
  - c. Certificate
  - d. Diploma
  - e. Bachelor Degree
  - f. Honours Degree

- The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate by circling how often you felt or thought a certain way.

1. In the last month, how often have you been upset because of something that happened unexpectedly?

0 1 2 3 4

3. In the last month, how often have you felt nervous and “stressed”? 0 1 2 3 4

5. In the last month, how often have you felt that things were going your way?

0 1 2 3 4

6. In the last month, how often have you found that you could not cope with all the things that you had to do? 0 1 2 3 4

7. In the last month, how often have you been able to control irritations in your life?  
0 1 2 3 4

8. In the last month, how often have you felt that you were on top of things?  
0 1 2 3 4

9. In the last month, how often have you been angered because of things that were outside of your control?  
0 1 2 3 4

10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?  
0 1 2 3 4

11. Out of the following, please circle all of the options that have caused you stress **as a university student**:

- I do not feel stressed
- Heavy workload (papers, quizzes, tests, etc)
- Poor performance/Poor marks
- Missing family
- Social isolation/ lack of friends
- Financial costs
- Lack of sleep
- Academic pressure
- Full schedule
- Poor eating habits
- Romantic relationships
- Health related issues
- Cultural/Traditional reasons (e.g. issues related to traditional beliefs relating to ancestors)

12. If you feel/felt stressed, what do you do/ did you do to help yourself feel better **as a university student**? (please circle all that apply)

- I do not feel stressed
- Exercise/ work out
- Talk to friends
- Talk to family
- Talk to a psychological counselor/ social worker
- Drink alcohol
- Listen to music
- Visit a doctor
- Visit a traditional healer (e.g. sangoma, nyanga)
- Other: \_\_\_\_\_

Thank you for your time.

## END OF SURVEY

*Appendix 2: Interview Topics***Interview Topics**

1. Current status of mental health in university students
  - a. Do you believe that university students in this area are stressed? How stressed?
  - b. Do you believe that certain groups of students are more stressed? Which subgroups, and why?
2. Causes of stress in university students
  - a. What do you believe causes stress in university students?
  - b. When are university students most stressed?
3. Available mental health resources (or lack thereof) for university students and surrounding perceptions
  - a. How do students cope when stressed? What resources are available?
  - b. How does stress impact students?
  - c. How easy or difficult is it for students to access mental health resources?
  - d. How acceptable is it for students to access mental health resources?
  - e. How affordable is it for students to access mental health resources?
4. Ideas for improved resources
  - a. How could resources for students who experience high stress be improved?

*Appendix 3: SIT Consent Form*

## Consent Form For Adult Respondents in English

**SIT Study Abroad**

a program of World Learning

**CONSENT FORM****1. Brief description of the purpose of this project**

The purpose of this project is to survey university students and interview various mental health professionals from the Durban region of South Africa. The data will be analyzed and used to better understand the current status of South African university students' mental health, as well as the causes of their stress levels. In the future, such information can be used to create better stress prevention strategies and to reallocate resources where they are needed most.

**2. Rights Notice**

In an endeavor to uphold the ethical standards of all SIT ISP proposals, this study has been reviewed and approved by a Local Review Board or SIT Institutional Review Board. If at any time, you feel that you are at risk or exposed to unreasonable harm, you may terminate and stop the interview. Please take some time to carefully read the statements provided below.

- a. **Privacy** - all information you present in this interview may be recorded and safeguarded. If you do not want the information recorded, you need to let the interviewer know.
- b. **Anonymity** - all names in this study will be kept anonymous unless you choose otherwise.
- c. **Confidentiality** - all names will remain completely confidential and fully protected by the interviewer. By signing below, you give the interviewer full responsibility to uphold this contract and its contents. The interviewer will also sign a copy of this contract and give it to you.

I understand that I will receive **no gift** or direct benefit for participating in the study.

I confirm that the learner has given me the address of the nearest School for International Training Study Abroad Office should I wish to go there for information. (404 Cowey Park, Cowey Rd, Durban).

I know that if I have any questions or complaints about this study that I can contact anonymously, if I wish, the Director/s of the SIT South Africa Community Health Program (Zed McGladdery 0846834982 )

\_\_\_\_\_  
Participant's name printed  
\_\_\_\_HENRY STODDARD\_\_\_\_  
Interviewer's name printed


\_\_\_\_\_  
Your signature and date  
\_\_\_\_10-20-17\_\_\_\_\_  
Interviewer's signature and date

I can read English. If the participant cannot read, the onus is on the project author to ensure that the quality of consent is nonetheless without reproach. Additionally, these questions are related to sensitive topics. Mental health is a serious issue and should not be taken lightly. If you feel particularly distressed or triggered by participating, please do not participate in this study, and consider contacting a mental health professional for psychological help.



*Appendix 4: Local Review Board Clearance Form*

**Human Subjects Review  
LRB/IRB ACTION FORM**

|                                                        |                                                                                                                                                          |
|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name of Student: Henry Stoddard                        | Institution: World Learning Inc.<br>IRB organization number: IORG0004408<br>IRB registration number: IRB00005219<br>Expires: 22 December 2014            |
| ISP Title: Mental Health Trends in University Students | LRB members (print names):<br>Clive Bruzas PhD<br>Frances O'Brien PhD<br>John McGladdery                                                                 |
| Date Submitted: 20 October 2017                        | <b>LRB REVIEW BOARD ACTION:</b><br>X Approved as submitted<br>___ Approved pending changes<br>___ Requires full IRB review in Vermont<br>___ Disapproved |
| Program: Durban Community Health and Social Policy     | LRB Chair Signature:<br>                                              |
| Type of review: Local                                  | Date: 25 October 2017                                                                                                                                    |
| Exempt <input type="checkbox"/>                        |                                                                                                                                                          |
| Expedited X <input checked="" type="checkbox"/>        |                                                                                                                                                          |
| Full <input type="checkbox"/>                          |                                                                                                                                                          |

**Form below for IRB Vermont use only:**

**Research requiring full IRB review. ACTION TAKEN:**

\_\_\_ approved as submitted \_\_\_ approved pending submission or revisions \_\_\_ disapproved

\_\_\_\_\_  
IRB Chairperson's Signature

\_\_\_\_\_  
Date

*Appendix 5: Consent to Use Form**Access, Use, and Publication of ISP/FSP*

Student Name: Henry Stoddard

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Email Address: [hstoddar@tulane.edu](mailto:hstoddar@tulane.edu)

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Title of ISP/FSP: When the Books Hit Back: Perceived Stress in University Students

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Program and Term/Year: Community Health and Social Policy Fall 2017

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Student research (Independent Study Project, Field Study Project) is a product of field work and as such students have an obligation to assess both the positive and negative consequences of their field study. Ethical field work, as stipulated in the SIT Policy on Ethics, results in products that are shared with local and academic communities; therefore copies of ISP/FSPs are returned to the sponsoring institutions and the host communities, at the discretion of the institution(s) and/or community involved.

By signing this form, I certify my understanding that:

1. I retain ALL ownership rights of my ISP/FSP project and that I retain the right to use all, or part, of my project in future works.
2. World Learning/SIT Study Abroad may publish the ISP/FSP in the SIT Digital Collections, housed on World Learning's public website.
3. World Learning/SIT Study Abroad may archive, copy, or convert the ISP/FSP for non-commercial use, for preservation purposes, and to ensure future accessibility.
  - World Learning/SIT Study Abroad archives my ISP/FSP in the permanent collection at the SIT Study Abroad local country program office and/or at any World Learning office.
  - In some cases, partner institutions, organizations, or libraries in the host country house a copy of the ISP/FSP in their own national, regional, or local collections for enrichment and use of host country nationals.
4. World Learning/SIT Study Abroad has a non-exclusive, perpetual right to store and make available, including electronic online open access, to the ISP/FSP.
5. World Learning/SIT Study Abroad websites and SIT Digital Collections are publicly available via the Internet.

6. World Learning/SIT Study Abroad is not responsible for any unauthorized use of the ISP/FSP by any third party who might access it on the Internet or otherwise.
7. I have sought copyright permission for previously copyrighted content that is included in this ISP/FSP allowing distribution as specified above.

HENRY STODDARD

12/8/2017

Student Signature

Date

**Withdrawal of Access, Use, and Publication of ISP/FSP**

Given your agreement to abide by the SIT Policy on Ethics, withdrawing permission for publication may constitute an infringement; the Academic Director will review to ensure ethical compliance.

☐

I hereby withdraw permission for World Learning/SIT Study Abroad to include my ISP/FSP in the Program's office permanent collection.

Reason:

☐

I hereby withdraw permission for World Learning/SIT Study Abroad to release my ISP/FSP in any format to individuals, organizations, or libraries in the host country for educational purposes as determined by World Learning/SIT Study Abroad.

Reason:

☐

I hereby withdraw permission for World Learning/SIT Study Abroad to publish my ISP/FSP on its websites and in any of its digital/electronic collections, or to reproduce and transmit my ISP/FSP electronically.

Reason:

Student Signature

Date

Academic Director has reviewed student reason(s) for withdrawing permission to use and agrees it does not violate the SIT Study Abroad Policy on Ethics.